Columbian Chemicals Company

October 20, 1983

Attached are charts and tables covering U.S.A. carbon black and dry rubber hydrocarbon consumption during the second quarter and the first half of 1983.

FURNACE BLACK

Second quarter production increased 3% and shipments 6% over the same period of 1982 to 271 thousand metric tons each. For the first half, although production of 541 MMT eased 0.4% from the year before level, shipments of 551 MMT improved over the first half of 1982 by 2%. Demand in all grades was up, except N-500 which dropped to the lowest in any semi-annual period in twenty-five years.

Plant inventory decreased 3% during the quarter to 87 MMT, a four-week supply, varying from three weeks in N-300, N-500 and N-600, to five weeks in N-200 and N-700, to ten weeks in N-100.

DRY RUBBER HYDROCARBONS
(Excluding Reclaim)

Although 2% lower than the year ago level, U.S.A. dry rubber hydrocarbon consumption totaling 589 MMT increased 6% over the first quarter, with all polymers up except SBR, down 2% and Nitrile, practically unchanged. Year-to-date consumption of 1144 MMT decreased 4% from the first half of 1982.

Both rubber ratios were higher during the quarter: the synthetic share, from 70.2% a year ago to 76.3 and the carbon black, from 41.4 to 45.2 parts per hundred rubber.

SBR black rubber production of 59 MMT was the lowest in any second quarter since 1959. First half output of 125 MMT decreased 17% from 1982.

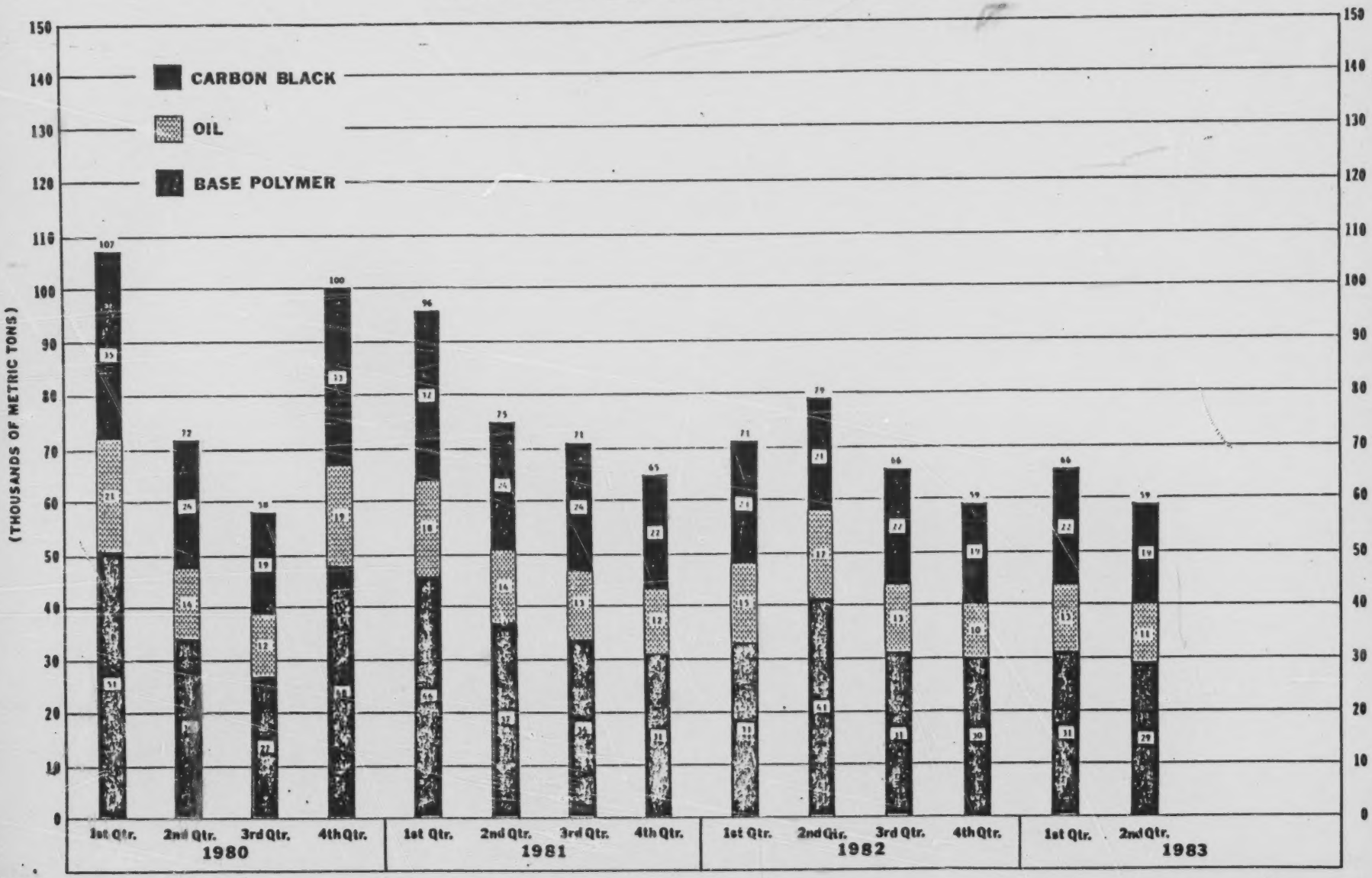
Very truly yours,

G. T. Madden, Vice President
Marketing & Product Management
Rubber Chemicals

GTM:jm

3200 West Market Street Box 5373 Akron, Ohio 44313 (216) 867-5800

SBR BLACK RUBBER PRODUCTION



COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

I. CARBON BLACK INDUSTRY IN THE U.S.A.

(Metric Tons)

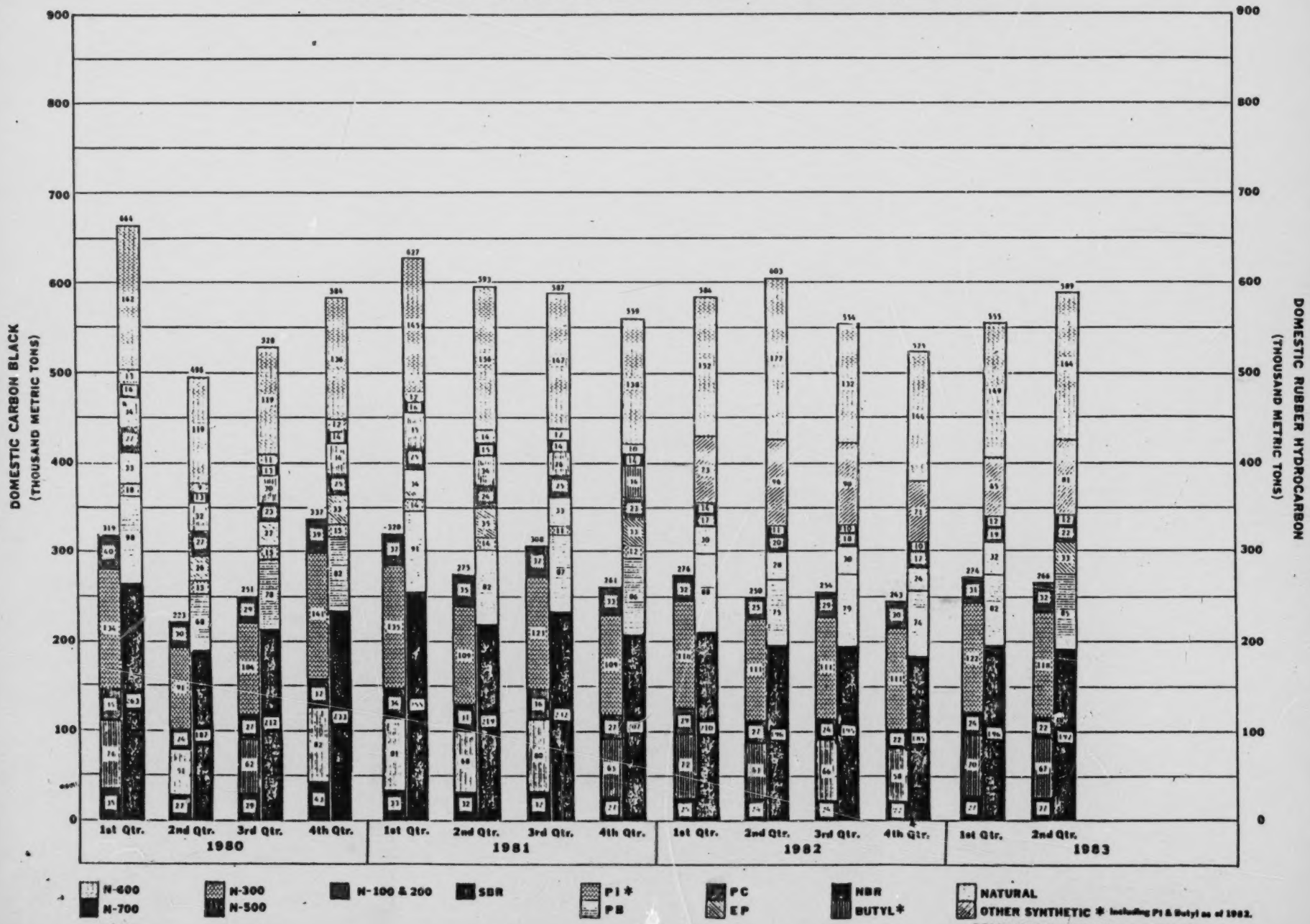
			1983		Percentage Change	
			2nd Qtr.	1st Half	2nd Qtr. '83 vs. 2nd Qtr. '82	1st Half '83 vs. 1st Half '82
N-100	(SAF)	Prod.	5,265	10,521	+ 7.4%	+14.8%
		Ship.	4,381	9,632	+ 7.4%	+15.1%
N-200	(ISAF)	Prod.	30,964	57,366	+19.0%	+ 3.8%
		Ship.	30,103	58,651	+21.5%	+ 6.3%
N-300	(HAF)	Prod.	117,890	241,071	+ 0.7%	+ 2.5%
		Ship.	119,178	242,098	+ 5.1%	+ 3.2%
N-500	(FEF)	Prod.	23,317	45,016	(3.8%)	(15.8%)
		Ship	21,722	46,305	(17.1%)	(16.2%)
N-600	(GPF)	Prod.	65,364	133,998	(6.1%)	(5.5%)
		Ship.	67,880	138,436	+ 7.2%	+ 1.4%
N-700	(SAF)	Prod.	28,395	52,770	+32.4%	+10.4%
		Ship.	27,914	55,524	+12.6%	+ 8.2%
Total		Prod.	271,195	540,742	+ 3.0%	(0.4%)
		Ship.	271,178	550,646	+ 5.7%	+ 1.7%
Domestic Shipments (Included Above)			266,249	540,537	+ 6.6%	2.8%
Domestic Share			98.2%	98.2%		

II. SBR BLACK RUBBER PRODUCTION

(Metric Tons)

	1983		Percentage Change	
	2nd Qtr.	1st Half	2nd Qtr. '83 vs. 2nd Qtr. '82	1st Half '83 vs. 1st Half '82
Net Polymer	28,596	60,269	(30.4%)	(18.6%)
Oil	11,259	23,981	(32.8%)	(23.7%)
Oil % of Net Polymer	39.4%	39.8%		
Net Rubber	39,855	84,250	(31.1%)	(20.2%)
Net Rubber % of Dry SBR	20.5%	21.0%		
Carbon Black	19,199	40,890	(9.3%)	(7.9%)
Total SBR Black Rubber	59,054	125,140	(25.2%)	(16.6%)

U.S.A. DRY RUBBER HYDROCARBON & CARBON BLACK CONSUMPTION



COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

2/7/84
B2320-1

Columbian Chemicals Company

January 30, 1984

Attached are charts and tables covering carbon black and dry rubber hydrocarbon consumption in the U.S.A. during the third quarter of 1983.

FURNACE BLACK

Third quarter production increased 18% and shipments 13% over the corresponding period of 1982 to 285 and 294 thousand metric tons respectively. For production, it was the highest quarter in three years and for shipments, the highest in two years. Demand in all grades was up, with N-100 reaching the second highest in history, within 7% of the record fourth quarter of 1972. Both year-to-date production of 826 MMT and shipments of 845 MMT increased 5% over 1982 level.

Plant inventory reduced 10% during the quarter to 78 MMT, a 3½ week supply, varying from three weeks in N-300, N-500 and N-600 to four weeks in N-200, six weeks in N-700 and eight weeks in N-100.

DRY RUBBER HYDROCARBONS
(Excluding Reclaim)

Although 0.2% below the second quarter, consumption of dry rubber hydrocarbons totaling 588 thousand metric tons was the strongest in any third quarter since 1979. All synthetic polymers were up from 1982, ranging from 4% in SBR to 13% in Polybutadiene, 16% in Polychloroprene and over 28% in Nitrile and EPDM. Natural Rubber's 129 MMT represented the weakest in three years. For the first nine months, consumption of 1,733 MMT remained practically unchanged from the year before level.

The synthetic ratio of 78.0% rose to the highest in any quarter in ten years and carbon-rubber ratio increased from 46.4 phr a year ago to 49.2 per hundred rubber.

SBR black rubber production of 58 MMT was the lowest quarter in three years. Year-to-date output of 184 MMT decreased 15% from the same period of 1982.

Very truly yours,

G. T. Madden, Vice President
Marketing & Product Management
Rubber Chemicals

GTM: jm

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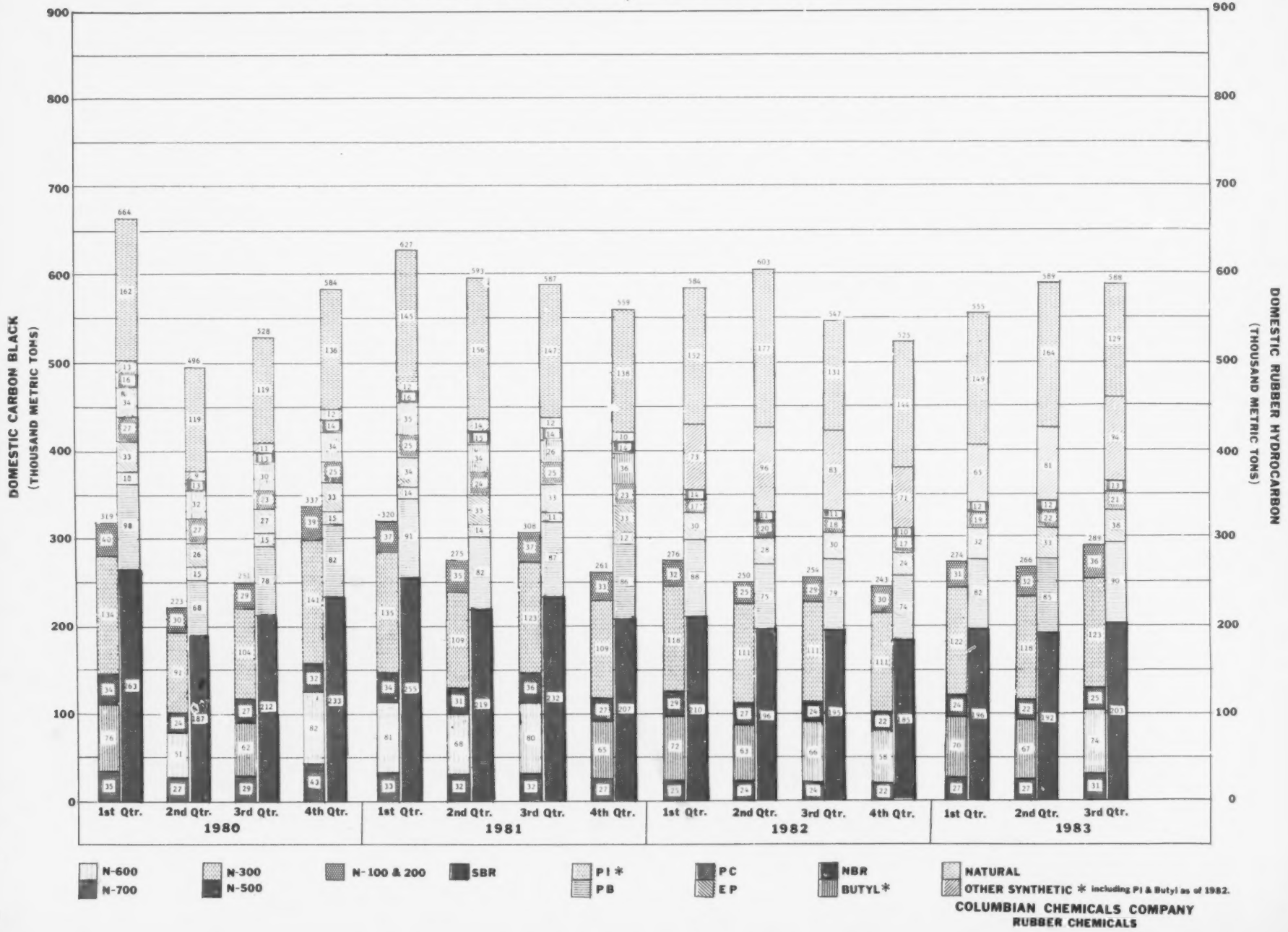
I. CARBON BLACK INDUSTRY IN THE U.S.A.
(Metric Tons)

			1983		Percentage Change	
			3rd Qtr.	9 Months	3rd Qtr. '83 vs. 3rd Qtr. '82	9 Months '83 vs. 9 Months '82
N-100	(SAF)	Prod.	4,599	15,120	+25.8%	+18.0%
		Ship.	5,449	15,081	+19.0%	+16.5%
N-200	(ISAF)	Prod.	31,268	88,635	+23.2%	+ 9.9%
		Ship.	33,164	91,815	+20.5%	+11.0%
N-300	(HAF)	Prod.	119,433	360,505	+10.9%	+ 5.1%
		Ship.	124,027	366,125	+ 9.5%	+ 5.2%
N-500	(FEF)	Prod.	24,177	69,192	+11.6%	(7.9%)
		Ship	24,767	71,072	+ 1.7%	(10.7%)
N-600	(GPF)	Prod.	73,972	207,970	+22.5%	+ 2.8%
		Ship.	75,071	213,506	+13.9%	+ 5.5%
N-700	(SAF)	Prod.	31,904	84,673	+33.7%	+18.2%
		Ship.	31,443	86,968	+29.8%	+15.2%
TOTAL		Prod.	285,353	826,095	+17.6%	+ 5.2%
		Ship.	293,921	844,567	+13.1%	+ 5.4%
Domestic Shipments (Included Above)			289,023	829,560	+13.7%	+ 6.3%
Domestic Share			98.3%	98.2%		

II. SBR BLACK RUBBER PRODUCTION
(Metric Tons)

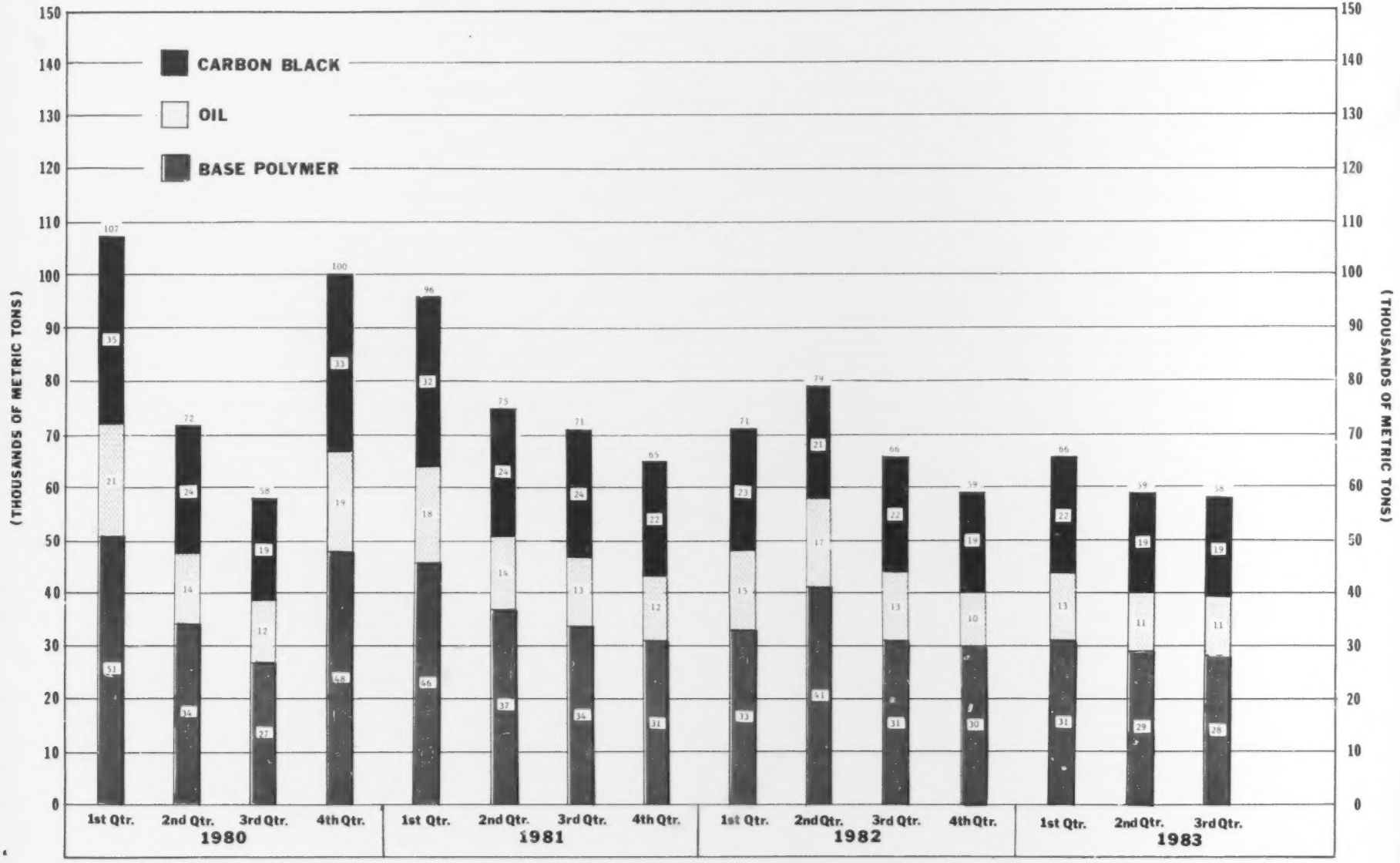
	1983		Percentage Change	
	3rd Qtr.	9 Months	3rd Qtr. '83 vs. 3rd Qtr. '82	9 Months '83 vs. 9 Months '82
Net Polymer	28,690	88,959	(9.0%)	(15.7%)
Oil	10,755	34,736	(18.2%)	(22.0%)
Oil % of Net Polymer	37.6%	39.1%		
Net Rubber	39,445	123,695	(11.7%)	(17.6%)
Net Rubber % of Dry SBR	21.0%	21.0%		
Carbon Black	18,985	59,875	(13.3%)	(9.6%)
TOTAL SBR Black Rubber	58,430	183,570	(12.2%)	(15.1%)

U.S.A. DRY RUBBER HYDROCARBON & CARBON BLACK CONSUMPTION



COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

SBR BLACK RUBBER PRODUCTION



COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

4/2/84
B2320-1 a

Columbian Chemicals Company

March 20, 1984

Attached are charts and tables covering U.S.A. carbon black and dry rubber hydrocarbon consumption during the year of 1983.

FURNACE BLACK

1983 furnace black production rebounded 8% and shipments 11% from 1982 to 1,132 and 1,161 thousand metric tons respectively. Demand in all grades was up except N-500 which was down to the lowest in twenty-seven years.

Fourth quarter production rose 18% from the comparable period of 1982 to 306 MMT and shipments, 27% to 316 MMT. This was the highest production since the second quarter of 1981. Shipments were the highest since the first quarter of 1981.

Plant inventory for the year diminished to the lowest since 1965 to 68 MMT, a three-week supply, ranging from two and one half weeks in N-300, N-500 and N-600, to four weeks in N-200 and N-700, to five and one half weeks in N-100.

DRY RUBBER HYDROCARBONS
(Excluding Reclaim)

U.S.A. dry rubber hydrocarbon consumption increased 5% over 1982 to 2,387 thousand metric tons, the strongest in four years, with demand in EPDM, Polybutadiene and Natural Rubber the highest also in four years. Although 13% over 1982, consumption of Nitrile (50 MMT) was the second lowest in eight years.

Both rubber ratios were higher than 1982: the synthetic share, from 72.7% to 73.3% and carbon black, from 44.9 to 47.8 parts per hundred rubber.

Despite a 25% upturn in the fourth quarter, 1983 SBR black rubber production declined 7% from the year before to 257 MMT, a twenty-five year low.

Very truly yours,

G. T. Madden, Vice President
Marketing & Product Management
Rubber Chemicals

GTM:gs

3200 West Market Street Box 5373 Akron, Ohio 44313 (216) 867-5800

I. U.S.A. CARBON BLACK INDUSTRY DATA

(Metric Tons)

		1983		Percentage Change	
		4th Qtr.	Year	4th Qtr. 83 vs. 4th Qtr. 82	Year 83 vs. Year 82
N-100 (SAF)	Prod.	6,324	21,443	+55.4%	+27.0%
	Ship.	6,806	21,888	+72.3%	+29.6%
N-200 (ISAF)	Prod.	38,341	126,976	+33.7%	+16.1%
	Ship.	37,785	129,600	+31.5%	+16.3%
N-300 (HAF)	Prod.	125,937	486,419	+11.0%	+ 6.6%
	Ship.	130,286	496,411	+15.3%	+ 7.7%
N-500 (FEF)	Prod.	24,787	93,979	(0.9%)	(6.2%)
	Ship.	25,607	96,679	+13.1%	(5.4%)
N-600 (GPF)	Prod.	78,971	286,941	+26.8%	+ 8.5%
	Ship.	80,205	293,711	+38.0%	+12.7%
N-700 (SRF)	Prod.	31,832	116,505	+25.5%	+20.1%
	Ship.	35,602	122,570	+63.3%	+25.9%
Total	Prod.	306,192	1,132,263	+18.3%	+ 8.4%
	Ship.	316,291	1,160,859	+27.4%	+10.6%
Domestic Shipments (Included Above)		310,570	1,140,129	+28.0%	+11.5%
Domestic Share		98.2%	98.2%		

II. SBR BLACK RUBBER PRODUCTION

(Metric Tons)

	1983		Percentage Change	
	4th Qtr.	Year	4th Qtr. 83 vs. 4th Qtr. 82	Year 83 vs. Year 82
Net Polymer	36,388	125,347	+22.1%	(7.4%)
Oil	13,275	48,011	+26.0%	(12.8%)
Oil % of Net Polymer	36.5%	38.3%		
Net Rubber	49,663	173,358	+23.1%	(9.0%)
Net Rubber % of Dry SBR	22.7%	21.5%		
Carbon Black	23,940	83,815	+29.3%	(1.1%)
Total SBR Black Rubber	73,603	257,173	+25.1%	(6.5%)

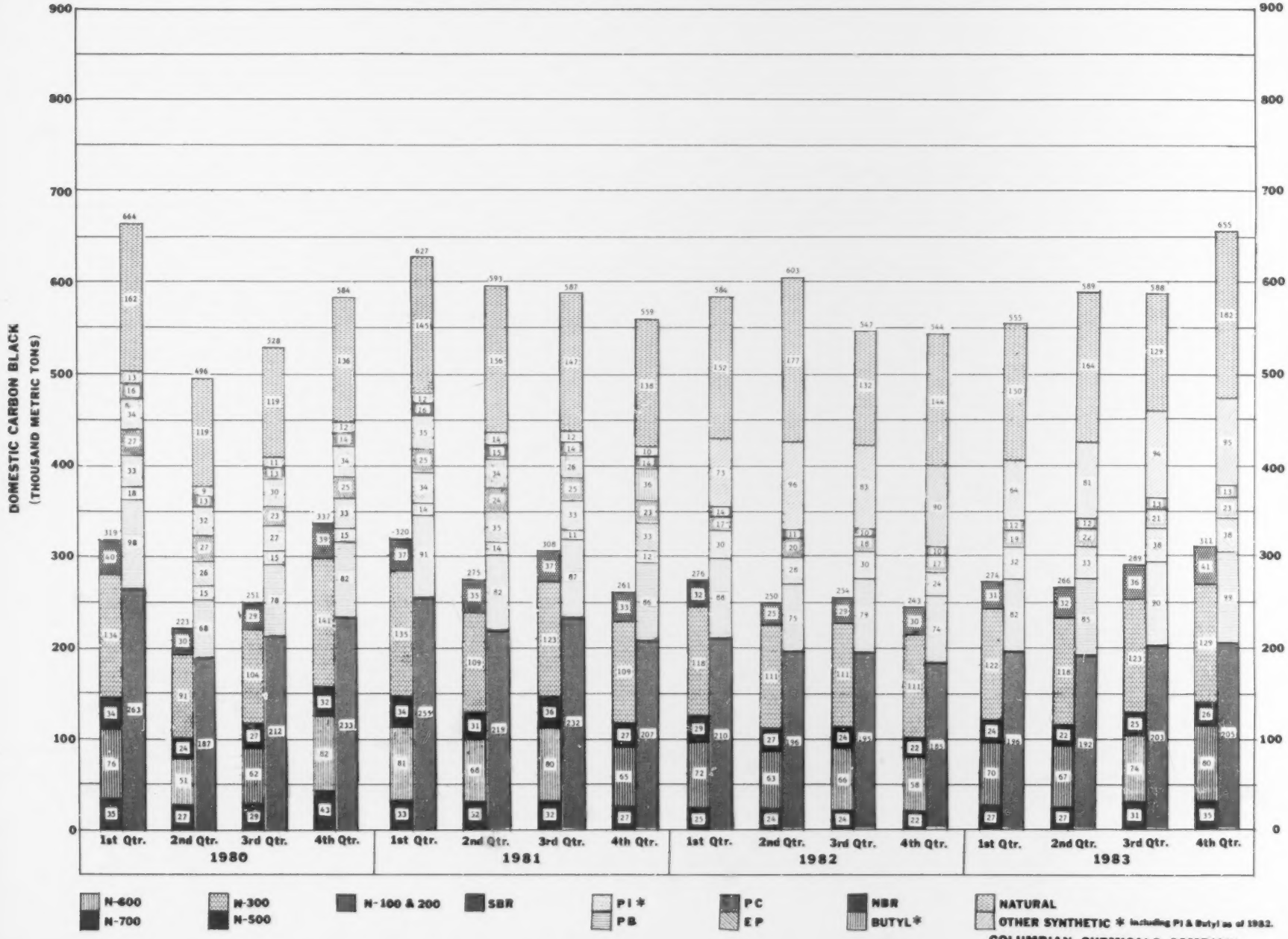
III. U.S.A. CARBON RUBBER RATIO DATA

(Thousands of Metric Tons)

	A TOTAL NEW RUBBER CONSUMED	B DRY RUBBER HYDROCARBONS (Excl.Reclaim)	C DRY WEIGHT LATEX	D LATEX % OF TOTAL NEW RUBBER C/A X 100	E FURNACE CARBONS	F CARBON PHR E/B X 100	G SYNTHETIC RATIO
1955	1,554	1,384	170	11.0%	464	33.5	58.5%
6	1,460	1,301	159	10.9%	437	33.6	60.9%
7	1,488	1,322	166	11.1%*	472	35.7	63.2%
8	1,386	1,233	153	11.0%	454	36.8	64.5%
9	1,654	1,472	182	11.0%	552	37.5	65.9%
1960	1,583	1,420	164	10.3%	538	37.9	69.3%
1	1,554	1,395	159	10.2%	546	39.1	72.1%
2	1,746	1,575	171	9.8%	626	39.7	73.1%
3	1,792	1,618	174	9.7%	665	41.1	74.1%
4	1,964	1,774	190	9.7%	754	42.5	75.1%
1965	2,088	1,894	194	9.3%	811	42.8	75.0%
6	2,247	2,062	185	8.2%	896	43.5	75.3%
7	2,151	1,970	181	8.4%	873	44.3	76.9%
8	2,518	2,308	210	8.3%	1,029	44.6	76.5%
9	2,664	2,444	221	8.3%	1,108	45.3	77.2%
1970	2,517	2,313	204	8.1%	1,063	46.0	77.4%
1	2,714	2,506	208	7.6%	1,180	47.1	78.4%*
2	2,979	2,759	220	7.4%	1,317	47.7	78.2%
3	3,129	2,903	227	7.2%	1,401	48.3	77.7%
4	3,075	2,944	164	5.3%	1,329	45.1	76.6%
1975	2,692	2,538	154	5.7%	1,191	46.9	75.1%
6	2,906	2,676	230*	7.9%	1,281	47.9	74.9%
7	3,244*	3,035*	209	6.4%	1,467	48.3	76.0%
8	3,201	2,976	225	7.0%	1,502*	50.5*	76.1%
9	3,080	2,869	210	6.8%	1,426	49.7	76.0%
1980	2,440	2,272	168	6.9%	1,130	49.7	76.0%
1	2,524	2,366	158	6.3%	1,164	49.2	74.9%
2	2,418	2,278	140	5.8%	1,023	44.9	72.7%
3	2,537	2,387	150	5.9%	1,140	47.8	73.3%
	+ 4.9%	+ 4.8%	+ 7.1%	+ 1.7%	+11.5%	+ 6.5%	+ 0.8%

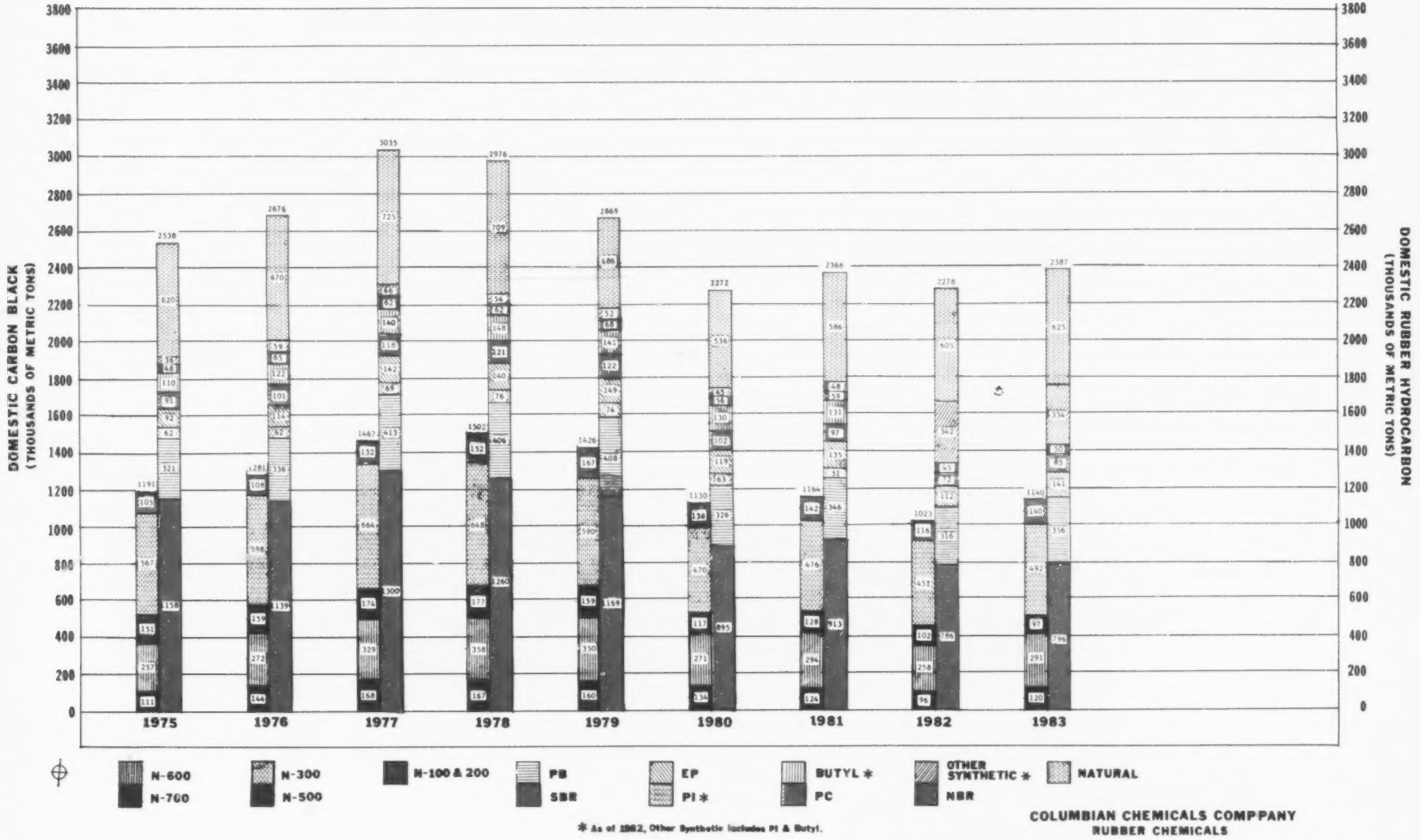
* = Record year.

U.S.A. DRY RUBBER HYDROCARBON & CARBON BLACK CONSUMPTION



COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

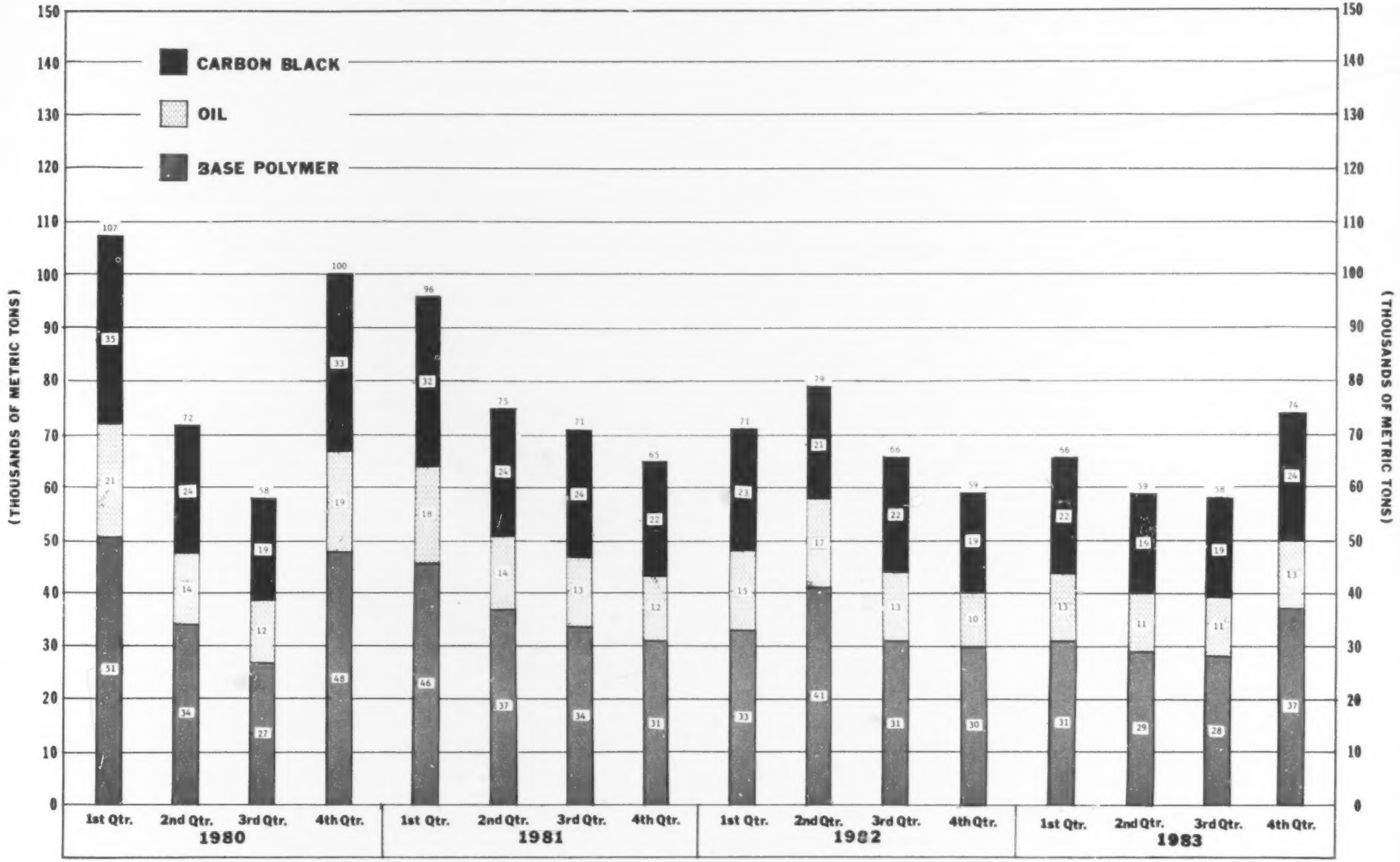
U.S.A. DRY RUBBER HYDROCARBON & CARBON BLACK CONSUMPTION



* As of 1982, Other Synthetic includes PI & Butyl.

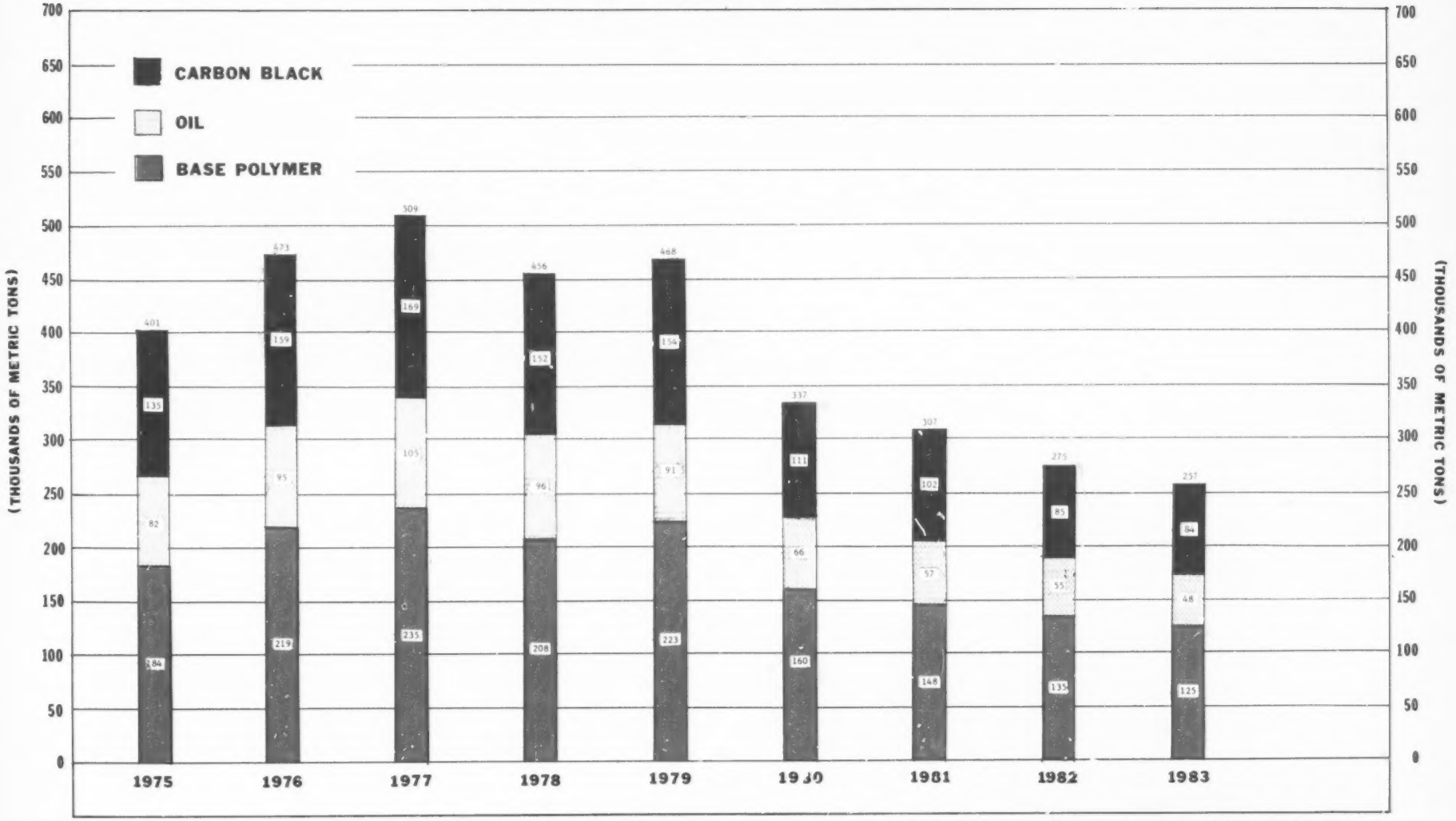
COLUMBIAN CHEMICALS COMPPANY
RUBBER CHEMICALS

SBR BLACK RUBBER PRODUCTION



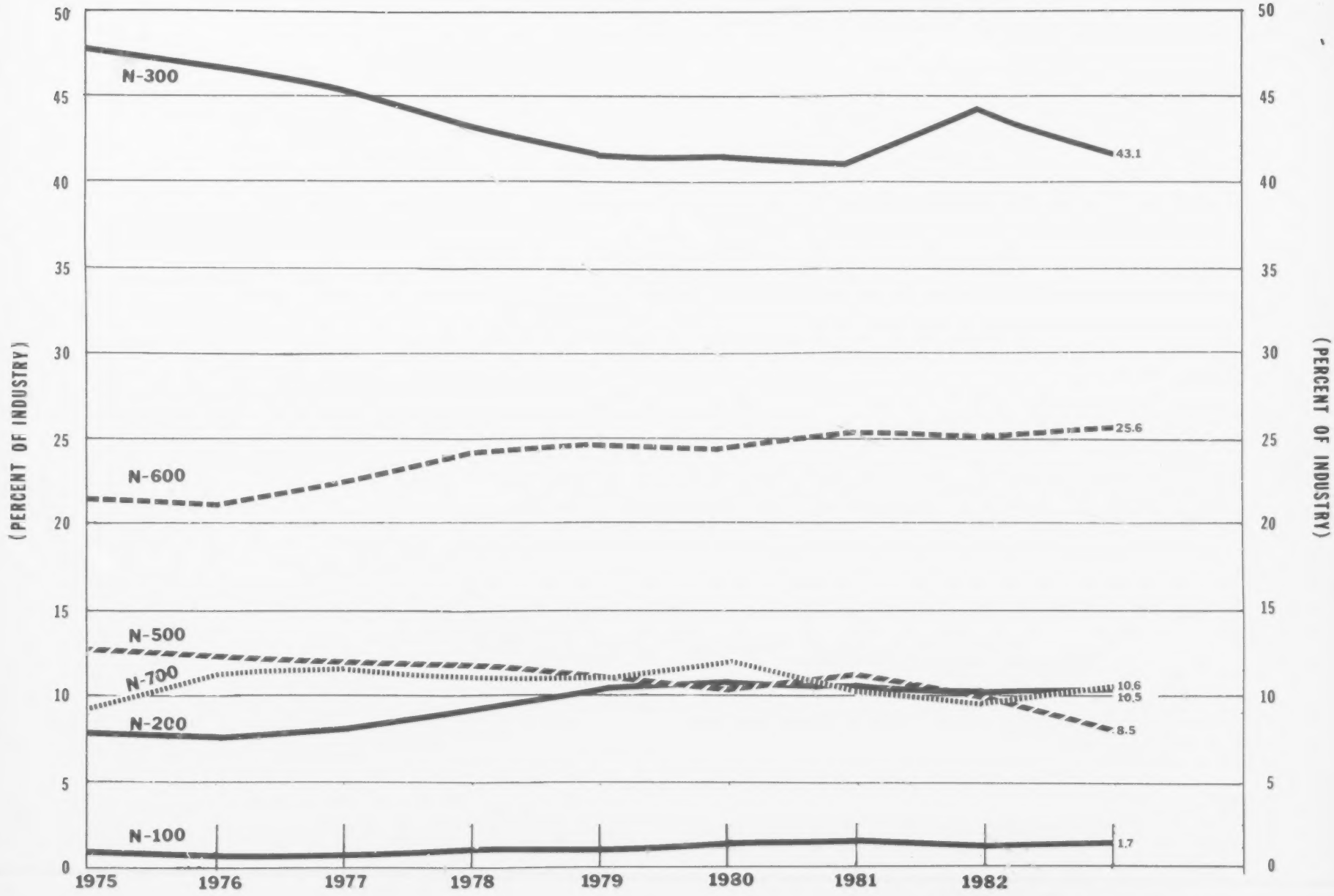
COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

SBR BLACK RUBBER PRODUCTION



COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

TRENDS IN U.S.A. FURNACE CARBON USAGE



COLUMBIAN CHEMICALS COMPANY
RUBBER CHEMICALS

B2320-1 A

Columbian Chemicals Company

June 20, 1984

Attached are a chart and a table concerning U.S.A. carbon black and dry rubber hydrocarbon consumption during the first quarter of 1984.

Furnace Black

First quarter production increased 20% and shipments 16% from the same period of 1983 to 323 thousand metric tons each. This was the highest production in three years and the highest shipments since the fourth quarter of 1980. Demand in all grades was up, with N-600 the strongest in four years and N-300 the highest in three years.

Plant inventories of 68 MMT represented less than a three week supply based on first quarter 1984 shipments.

Dry Rubber Hydrocarbons
(Excluding Reclaim)

Paralielling the carbon black industry performance, U.S.A. dry rubber hydrocarbon consumption rose to the highest level since the second quarter of 1979. Totaling 708 thousand metric tons, this was 27% over the year ago level. All polymers were up, with EPDM having a record quarter and Natural Rubber the highest since the second quarter of 1977.

Both rubber ratios were lower than 1983. The synthetic share declined from 73.1% to 71.4% and carbon black from 49.4 to 44.8 parts per hundred rubber.

Very truly yours,

G. T. Madden
Vice President, Sales
Tire Industry

GTM:gs

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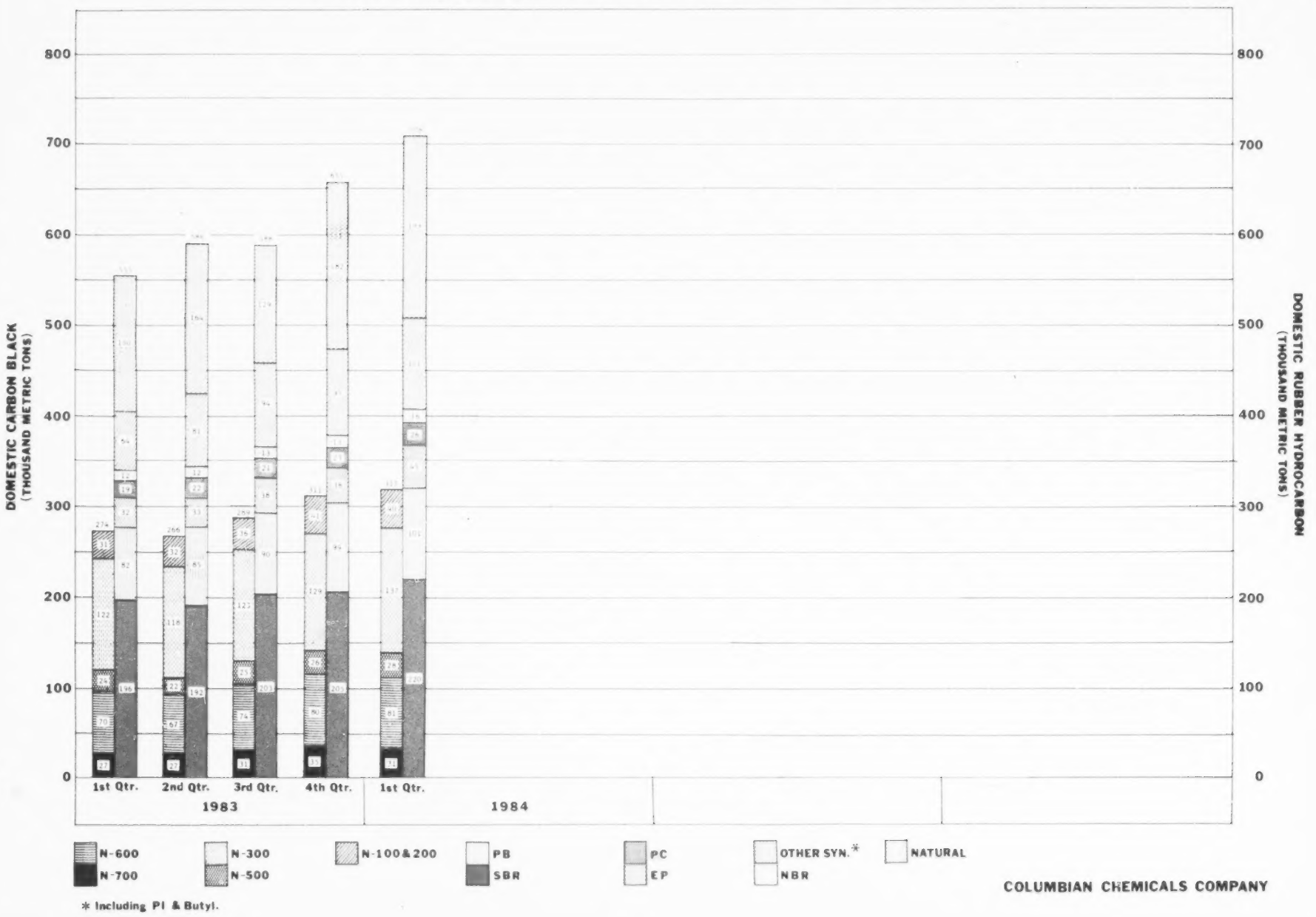
CARBON BLACK INDUSTRY IN THE U.S.A.
(Metric Tons)

		1st Qtr. 1984	Percentage Change from 4th Qtr. '83	Percentage Change from 1st Qtr. '83
N-100 (SAF)	Prod.	6,037	(4.5%)	+14.9%
	Ship.	6,362	(6.5%)	+21.2%
N-200 (ISAF)	Prod.	35,426	(7.6%)	+34.2%
	Ship.	36,629	(3.1%)	+28.3%
N-300 (HAF)	Prod.	142,365	+13.0%	+15.6%
	Ship.	137,868	+ 5.8%	+12.2%
N-500 (FEF)	Prod.	28,475	+14.9%	+31.2%
	Ship.	28,527	+11.4%	+16.0%
N-600 (GPF)	Prod.	80,638	+ 2.1%	+17.5%
	Ship.	81,539	+ 1.7%	+15.6%
N-700 (SRF)	Prod.	29,889	(6.1%)	+22.6%
	Ship.	31,754	(10.8%)	+15.0%
Total	Prod.	322,830	+ 5.4%	+19.8%
	Ship.	322,679	+ 2.0%	+15.5%
Domestic Shipments (Included Above)		316,965	+ 2.1%	+15.6%
Domestic Share		98.2%		

U.S.A. DRY RUBBER HYDROCARBON & CARBON BLACK CONSUMPTION



* Including PI & Butyl.

COLUMBIAN CHEMICALS COMPANY